Reply on AC2
Malcolm Levitt


Thankyou, Daniel. We may have a technical disagreement, though. I do not agree that the Redfield-Abragam approach, meaning that which leads to a relaxation superoperator constructed from double commutation superoperators, can ever lead to the correct thermalization for the case of strong spin order. As far as I know, there is no way to construct a "correct" relaxation superoperator purely from double commutators, whether one uses a semi-classical or a quantum theory. The only way to get it right is to abandon double commutation superoperators, as you and Bogdan in your paper do, where you propose "thermalized double commutators", which are technically not double commutators in the ordinary sense. So I believe that there is still a remaining disagreement between us on this point. However I am not completely sure of my ground, since the topic has formidable technical difficulties. Christian is a far more precise and careful thinker on these matters than myself. Nevertheless I think the right approach is for the contrasting approaches to appear in the literature so that the community can judge.